M-G550-PC

EPSON
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IMU (Inertial Measurement Unit)
CAN INTERFACE

■ GENERAL DESCRIPTION

The M-G550-PC is a small form factor inertial measurement unit (IMU) with 6 degrees of freedom: triaxial angular rates and linear accelerations, and provides high-stability and high-precision measurement capabilities with the use of high-precision compensation technology.
A variety of calibration parameters are stored in memory of the IMU, and are automatically reflected in the measurement data being sent to the application after the power of the IMU is turned on.
With a Controller Area Network (CAN) interface supported for host communication, the M-G550-PC reduces technical barriers for users to introduce inertial measurement and minimizes design resources to implement inertial movement analysis and control applications.
This unit is packaged in a water-proof and dust-proof metallic case. It is suitable for use in industrial and heavy duty applications.

The features of the IMU such as high stability, high precision, and small size make it easy to create and differentiate applications in various fields of industrial systems.

■ FEATURES

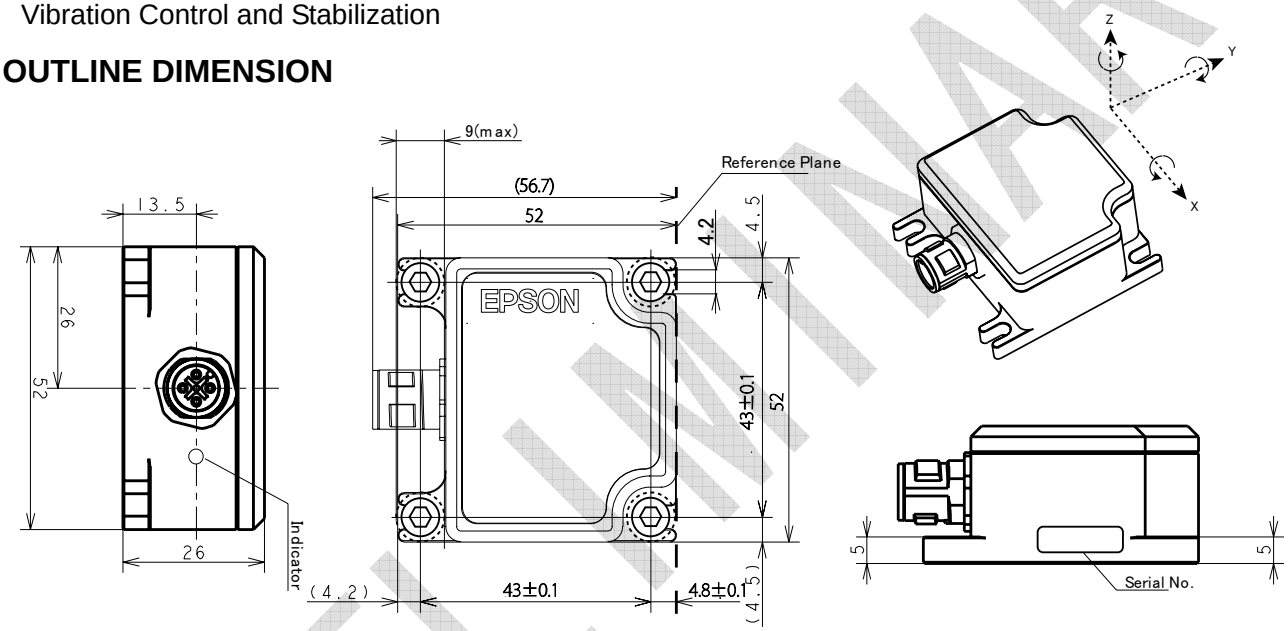
Item	Specification	Note
Sensor		
Integrated sensor	SEIKO EPSON Inertial Measurement Unit (IMU) Low-Noise, High-stability Gyro Bias Instability: 6 deg/hr Angular Random Walk : 0.2 deg/√hr Initial Bias Error : 0.5 deg/s (1σ) 6 Degree Of Freedom Triple Gyroscope : ±300 deg/s Tri-Axis Accelerometer : ±3 G 16bit data resolution Calibrated Stability (Bias, Scale Factor, Axial alignment)	M-G350-PD11
Sampling rate	1,000sps (Max)	Selectable
Interface		
Protocol	CANopen	
Physical layer	ISO11898-2 (High speed CAN)	
Frame format	CAN2.0A	
Profile	DS-301	Standard profile
	DS-404	Device profile for measuring devices
Bit rate	1M/ 800k/ 500k/ 250k/ 125k/ 50k/ 20k/ 10k bps	Selectable
Node-ID	1 to 127	
Other function		
Data logging	This unit can log 1,048,560 data samples	Logging Mode feature
Indicator	Run-LED (Green)/ Error-LED (Red)	Accordance with DS-303-3
Terminator	Not included	
General specification		
Voltage supply	9 to 30 V	
Power consumption	26.5mA (Typ. Vin = 12V)	
Operating temperature range	-25 to +70°C	

External dimension			
	Outer packaging	Overall metallic shield case	
	Size	52 x 52 x 26mm (Not including projection.)	
	Weight	85g	
	Interface connector	CAN connector: 5-pos, M12, water-proof	
	Water-proof , Dust-proof:	IP67	
Regulation			
	EU	CE marking (EN61326/RoHS Directive)	Class A
	USA	FCC part15B	Class A

■ APPLICATIONS

- Motion and Vibration Measurement
- Platform Stabilization
- Attitude Detection for Unmanned Systems
- Vibration Control and Stabilization

■ OUTLINE DIMENSION



Outline Dimensions (millimeters)

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